

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Group Art Unit: 2736

Alan C. Heller

Examiner: T. Mullen

Serial No.: 09/063,715

Filed: April 21, 1998

For: METHOD AND SYSTEM FOR LOCATING SUBJECTS  
WITHIN A TRACKING ENVIRONMENT

Attorney Docket No.: VERS 0109 PUS

AMENDMENT UNDER 37 C.F.R. § 1.111  
AND PETITION FOR EXTENSION OF TIME  
UNDER 37 C.F.R. § 1.136(a)

Assistant Commissioner for Patents  
Washington, D.C. 20231

OFFICIAL

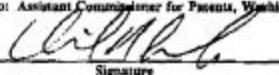
Sir:

Applicant hereby petitions for a one month extension of time to respond to the Office Action dated June 29, 1999, thereby extending the time period within which to respond to October 29, 1999.

In response to the Office Action mailed June 29, 1999, please amend the above-identified application as follows:

In The Specification:

Page 13, line 8, after the word "connected" insert --to--.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8		
I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on:		
October 26, 1999 Date of Deposit	David R. Szwedlik Name of Person Signing	 Signature

S/N: 09/063,715

y Dkt No. VER\$ 0109 PUS

**In The Abstract:**

Delete the three sentences beginning with the phrase "The collector" on line 24 and ending with the word "subjects" on line 34.

**In The Claims**

Please amend claims 1 and 5 as follows:

1. (Amended) A method for locating subjects within a tracking environment, the method comprising the steps of:

for each subject, providing a TAG [for] capable of transmitting [both] a substantially line-of-sight signal including a unique TAG ID [and] substantially simultaneously with a substantially non-line-of-sight signal also including the unique TAG ID;

providing an array of receivers distributed within the tracking environment, wherein the array of receivers includes an extended area receiver for receiving a plurality of substantially non-line-of-sight signals and a plurality of limited area receivers, each of the limited area receivers receiving substantially line-of-sight signals;

generating an extended area detection packet including the unique TAG ID in response to each received non-line-of-sight signal;

generating a limited area detection packet including the unique TAG ID in response to each received line-of-sight signal; and

determining the location of each TAG and its associated subject based on the identity of the extended area and limited area receivers for the TAG as represented by its extended area and limited area detection packets.

5. (Amended) A system for locating subjects within a tracking environment, the system including:

S/N: 09/063,715

y Dkt No. VERS 0109 PUS

for each subject, a TAG [for] capable of transmitting [both] a substantially line-of-sight signal including a unique TAG ID [and] substantially simultaneously with a substantially non-line-of-sight signal also including the unique TAG ID;

a receiver assembly including an array of receivers distributed within the tracking environment, wherein the array of receivers includes an extended area receiver for receiving a plurality of substantially non-line-of-sight signals, the receiver assembly generating an extended area detection packet including the unique TAG ID in response to each received non-line-of-sight signal, the array of receivers also including a plurality of limited area receivers, each of the limited area receivers receiving substantially line-of-sight signals, the receiver assembly generating a limited area detection packet including the unique TAG ID in response to each received line-of-sight signal;

a data communications controller coupled to the receiver assembly for collecting the extended area and limited area detection packets; and

a location processor coupled to the controller for receiving the collected detection packets and for determining the location of each TAG and its associated subject based on the identity of the extended area and limited area receivers for the TAG as represented by its extended area and limited area detection packets.

### Remarks

In the Office Action dated June 29, 1999 the Examiner objected to the disclosure for a number of informalities, including the question as to whether the word "interlace" should be replaced by the word "interface". The Examiner objected to the abstract as being too long. The Examiner rejected claims 1-12 under 35 U.S.C. § 102 as being anticipated by the U.S. Patent to Borras, et al. 5,301,353.

By this Amendment, applicant's attorney has amended the disclosure, including the abstract, in accordance with the Examiner's objections, except for the word "interlace", as described hereinbelow. Also, applicant's attorney has amended each of the independent claims of the application to more particularly point out and distinctly claim what applicant

-3-

5

23

S/N: 09/063,715

y Dkt No. VERS 0109 PUS

regards as his invention. In particular, applicant's attorney has amended claims 1 and 5 to make it clear that each TAG is capable of transmitting a substantially line-of-sight signal, including a unique TAG ID substantially simultaneously with a substantially non-line-of-sight signal including the unique TAG ID. This feature is neither taught, disclosed or discussed by any of the prior art references, including the U.S. Patent to Borrás, et al. taken either alone or in combination with one another.

For example, the U.S. Patent to Borrás, et al. as noted on page 2 of the specification, discloses a communication system and apparatus wherein the system utilizes one of two different types of communication methods depending on the location of the user. When the user is in an on-sight area the user communicates via infrared techniques. When the user is in an off-sight area the user communicates using a different communication media, including an RF communication media.

Clearly, this is contrary to the teachings of the present invention as now claimed. As noted on page 9, lines 24-26 of the specification, a single microprocessor of a TAG modulates different signals simultaneously or staggered. In other words, the TAG is capable of transmitting a substantially line-of-sight signal, including a unique TAG ID substantially simultaneously with a substantially non-line-of-sight signal also including a unique TAG ID.

With respect to the Examiner's objection to the use of the word "interlace", the Examiner's attention is directed to page 510 of the Modern Dictionary of Electronics, Sixth Edition, a copy of which is enclosed herewith for the Examiner's reference, wherein it is respectfully submitted that the word "interlace" is correct in that it denotes the transmission of the different signals at successive or alternating times. If the Examiner feels that the use of the word "interlace" may be confusing, the Examiner is requested to call the undersigned attorney and discuss whether the use of the word "alternating" may be a better word since in the preferred embodiment the RF and IR signal transmissions alternate.

-4-

6

S/N: 09/063,715

Dkt No. VERS 0109 PUS

Further, with respect to the use of the phrase "line-of-sight" the phrase "constrained signal" may be more accurate in a sense that the word "constrained" means a signal will not travel through common building materials that are used to form a room in a building (wood, plaster, drywall, etc.). Example of such "constrained" signals are infrared or visible light waves.

By contrast, the phrase "non-line-of-sight" may be replaced by the phrase "non-constrained" signal which also may be more accurate. "Non-constrained" in the context of the present invention means a signal that travels through common building materials that are used to form a room in a building as well as materials that "constrained" signals travel through. Examples of such "non-constrained" signals are radio frequency or ultrasonic waves. Consequently, the Examiner is requested to contact the undersigned attorney to discuss the use of these phrases instead of the phrases currently in the claims.

Consequently, in view of the above and in the absence of better art applicant's attorney respectfully submits that the application is in condition for allowance which allowance is respectfully requested.

-5-

7




S/N: 09/063,715

J Dkt No. VERS 0109 PUS

A check in the amount of \$55.00 is enclosed to cover the Petition fee. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978 -- a duplicate of this paper is enclosed for that purpose.

Respectfully submitted,

Alan C. Heller

By   
David R. Syrowik  
Reg. No. 27,956  
Attorney/Agent for Applicant

Date: October 25, 1999

**BROOKS & KUSHMAN P.C.**  
1000 Town Center, 22nd Floor  
Southfield, MI 48075  
Phone: 248-358-4400  
Fax: 248-358-3351

-6-

8

A